

- * Class will get to know each other, the teacher, and procedures (build community)
- * SWBAT use the scientific method to create an experiment, to be recorded in a Vee Chart.

Sep 6-2:31 PM

Welcome!!!

H. Leslie Grebe

SECA Physics
Monday 8 September 2014

- * Pick up
 - index card

New people?



Opening Activity: INTERVIEW the Teacher

On your **index card**:

- write some questions to ask Leslie
- I will answer them later this week
- you DON'T need to put your name

Sep 7-7:04 AM

So, let's do some Physics!!!

Centering

RHR - cellphones

- Groups of 1-3 people
- Push a car and observe how far it goes
- List as many things as you can that affect how far the car will go when you push it

Sep 8-7:32 AM

HOW HARD YOU PUSH

HEAVY/LIGHT CAR

FLAT/TILTED

OBSTACLES

TIRES SMOOTH?

SMOOTH/ROUGH SURFACE?

MATERIAL SURFACE

SHAPE OF TRACK

ANGLE OF PUSH

SIZE OF WHEELS

SHAPE OF CAR

↳ SPOILERS/FINS

AERODYNAMICS

WIND

Sep 8-12:17 PM

WIND
 TILT OF SURFACE
 HOW HARD PUSH/PULL
 SMOOTH SURFACE, DIRT?
 HEAVY/LIGHT CAR
 SIZE OF CAR
 WHEEL SIZE
 AERODYNAMIC, SHAPE
 PLASTIC/METAL

AXLE SIZE
 TREAD
 DIRECTION
 HUMIDITY?
 ELEVATION?

Sep 8-10:56 AM

TRACTION OF WHEELS
 FRICTION SIZE, WIDTH

MOMENTUM/SPEED

LENGTH OF CAR

MASS

BUMPY/ROUGH SURFACE
 FLAT?

SHAPE OF CAR, WINDOWS

AREA OF CAR

SLANT OF SURFACE
 OBSTACLES

HOW HARD WE PUSH

GRAVITY

MATERIAL IT'S
 MADE OF

WEATHER

Sep 8-10:01 AM

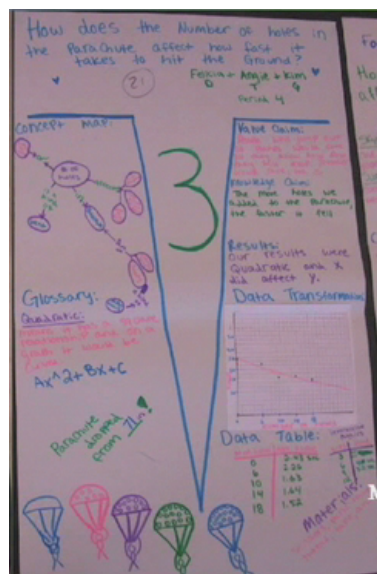
Notes...

Experiments: What's important?

- Have a question about how changing something** affects something else
- Make an educated guess about the answer before starting
MORE INTERESTING IF WRONG
- Measure, quantify \rightarrow USEFUL \rightarrow PREDICT
- ** change only **ONE** thing! Why?
 \hookrightarrow YOU KNOW THAT THING IS WHAT AFFECTED IT.

Sep 9-7:16 AM

The Vee Chart:
Shows what we found out from an experiment.



Sep 9-7:20 AM

① HOW DOES _____ AFFECT HOW FAR A TOY CAR GOES PAST THE END OF THE RAMP?

Our Set Up:

- * Pick a car
- * Let go from rest
- * Measure how far it goes past the end of the track
- * Pick one thing to change from the list below

② WE THINK . . .
BECAUSE . . .
WE'VE NOTICED . . .

USE RUBRIC

Today... Parts 1-2:

- * Groups of 1-3.
Pick team name
- * Pick a question
- * Guess at the answer - explain

USE PENCIL

Forces

Things to change (pick one):

- Texture of driving surface
[sand paper grit]
- Weight of car
- Height of release

Challenge: Bump in track?

Sep 9-7:25 AM

CP Homework:

Brainstorm steps you might need when doing your experiment. What do you need to do and measure? (minimum 5, maximum 20+)

Sep 8-8:13 AM